

# WISCONSIN DNR FISHERIES INFORMATION SHEET

LAKE: STAR COUNTY: VILAS YEAR: 2005

The Department of Natural Resources surveyed Star Lake, Vilas County, from April 17 through May 31, 2005, to determine the health of its fishery. The survey was designed to assess the lake's walleye and muskellunge populations. Star Lake is a relatively fertile drainage lake with predominantly sand substrate and a moderate-density walleye population. It has a surface area of 1206 acres, 11.7 miles of shoreline and a maximum depth of 68 feet.

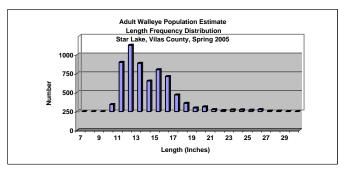


Figure 1. Length frequency distribution of 4295 adult\* walleye estimated to be in Star Lake, Vilas County, based on a spring 2005 survey.

\* Note: Adult walleye are defined as all sexable walleye and walleye of unknown sex ≥ 15 inches long.

#### Walleve

We conducted a mark-recapture survey of Star Lake's adult\* walleye population from April 17-25, 2005. We captured and marked (fin clipped) 1923 adult walleye in nine days of fyke netting. Two crews sampled Star Lake with electro-fishing boats on April 25th and captured 582 adult walleye. Nearly 46% (266 of 582) of those walleye bore the fin clip given during fyke netting.

Based on those results, we estimated that Star Lake was inhabited by 4295 adult walleye (3.6/acre). Approximately 47% (2032 of 4295) of adult walleye were 14 inches long or larger. The largest walleye we captured was a 29.7-inch female.

#### **Smallmouth Bass**

Sampling through May 31st did not produce adequate numbers of smallmouth bass to allow us to estimate the abundance of smallmouth bass in Star Lake. We did capture enough smallmouth bass to get a picture of the size structure of the population inhabiting Star Lake. We captured 54 smallmouth bass, 8-inches or larger, during our fyke netting and electro-fishing sampling. Approximately 57% (31 of 54) of those smallmouth were 14 inches long or larger. The largest smallmouth bass we captured was 19.2 inches long.

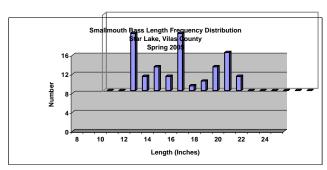
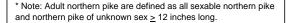


Figure 2. Length frequency distribution of 54 smallmouth bass ≥ 8" captured during a fisheries survey of Star Lake, Vilas County, in spring 2005.

## Northern Pike

We captured 52 adult\* northern pike in fyke nets fished in Star Lake from April 17-25, 2005. Approximately 94% (49 of 52) of adult northern pike we captured were less than 26 inches long. Only two of the northern pike we captured were 32 inches long or larger. The largest northern pike we captured was a 36.3-inch female.



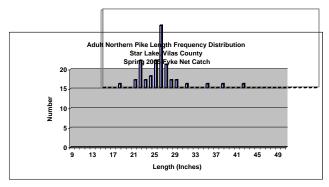


Figure 3. Length frequency distribution of 52 adult\* northern pike captured in fyke nets during a fisheries survey of Star Lake, Vilas County, in spring 2005.

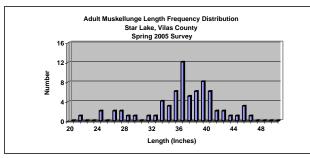


Figure 4. Length frequency distribution of 71 adult\* muskellunge captured during a fisheries survey of Star Lake, Vilas County, in spring 2005.

### Muskellunge

We captured 71 adult\* muskellunge during our fyke netting and electro-fishing sampling of Star Lake. Nearly 79% (56 of 71) of the adult muskellunge we captured were 34 inches long or larger. Approximately 23% (16 of 71) were 40 inches long or larger. The largest muskellunge we captured was a 46.5-inch female.

 $^{\star}$  Note: Adult muskellunge are defined as all sexable muskellunge and muskellunge of unknown sex  $\geq$  20 inches long.

## **Other Species**

We captured nine species of fish in our fyke netting and electro-fishing sampling of Star Lake in addition to the game fish mentioned above. Rock bass and yellow perch were abundant in our fyke net catches. We also caught moderate numbers of black bullhead, black crappie, bluegill, burbot, golden shiner, pumpkinseed and white sucker. Young-of-year walleye will be sampled in fall 2005. Additional sampling with fyke nets is planned for spring 2006 to capture muskellunge and complete a population estimate.

We are also conducting a creel (angler harvest) survey on Star Lake this year. Creel clerk Marty Kiepke will count and interview anglers and examine their catch throughout the 2005-06 fishing season.

Table 1. General Fishing Regulations for Star Lake, Vilas County, 2005

FISH SPECIES	OPEN SEASON	DAILY LIMIT	MINIMUM LENGTH
Walleye	May 7 - March 5	3	No minimum, only one over 14"
Largemouth and Smallmouth Bass	May 7 - June 17 (C&R)	None	
	June 18 - March 5 (Harvest)	5 in total	14 inches
Muskellunge	May 28 - Nov. 30	1	34 inches
Northern Pike	May 7 - March 5	5	None

A brief summary of selected fishing regulations for Star Lake is included above (Table 1). While the regulatory information provided was current at the time the surveys were conducted, it is not comprehensive and should not be used as a substitute for the current fishing regulation pamphlet. You may obtain a copy of current fishing regulations when you purchase your fishing license, or download a copy from our web site at:

http://www.dnr.state.wi.us/org/water/fhp/fish/

This report is interim only; data and findings should not be considered final. Results of creel surveys should be available by June 2006. If you are interested in a summary of the creel survey or want an update on this year's fyke netting and electro-fishing survey results, contact:

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